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**History** Enrico Fermi first experimented with nuclear fission in 1934 when he bombarded uranium with neutrons. Scientists soon realized that the neutrons split the nucleus of the uranium atoms and that if the resulting fission could release more neutrons, a sustainable nuclear chain reaction would result. Major governments around the world began to invest in the nuclear research.

On December 2, 1942, the first man-made nuclear reactor came on line in Chicago as part of the Manhattan Project, a widespread attempt by the U.S. government to research nuclear power. The implementation of plutonium led to creation of the first nuclear weapons. A uranium based explosive named "little boy" and the plutonium based "fat man" were dropped on Japan in 1945 to end World War II

**Advantages and disadvantages**

**Advantages**

Earth has limited supplies of fossil fuels. Nuclear power plants can still produce energy after fossil fuels become scarce. Nuclear power plants also need less fuel than ones that burn fossil fuels. Nuclear power plants do not pollute into the environment but coal and oil do.

**Disadvantages**

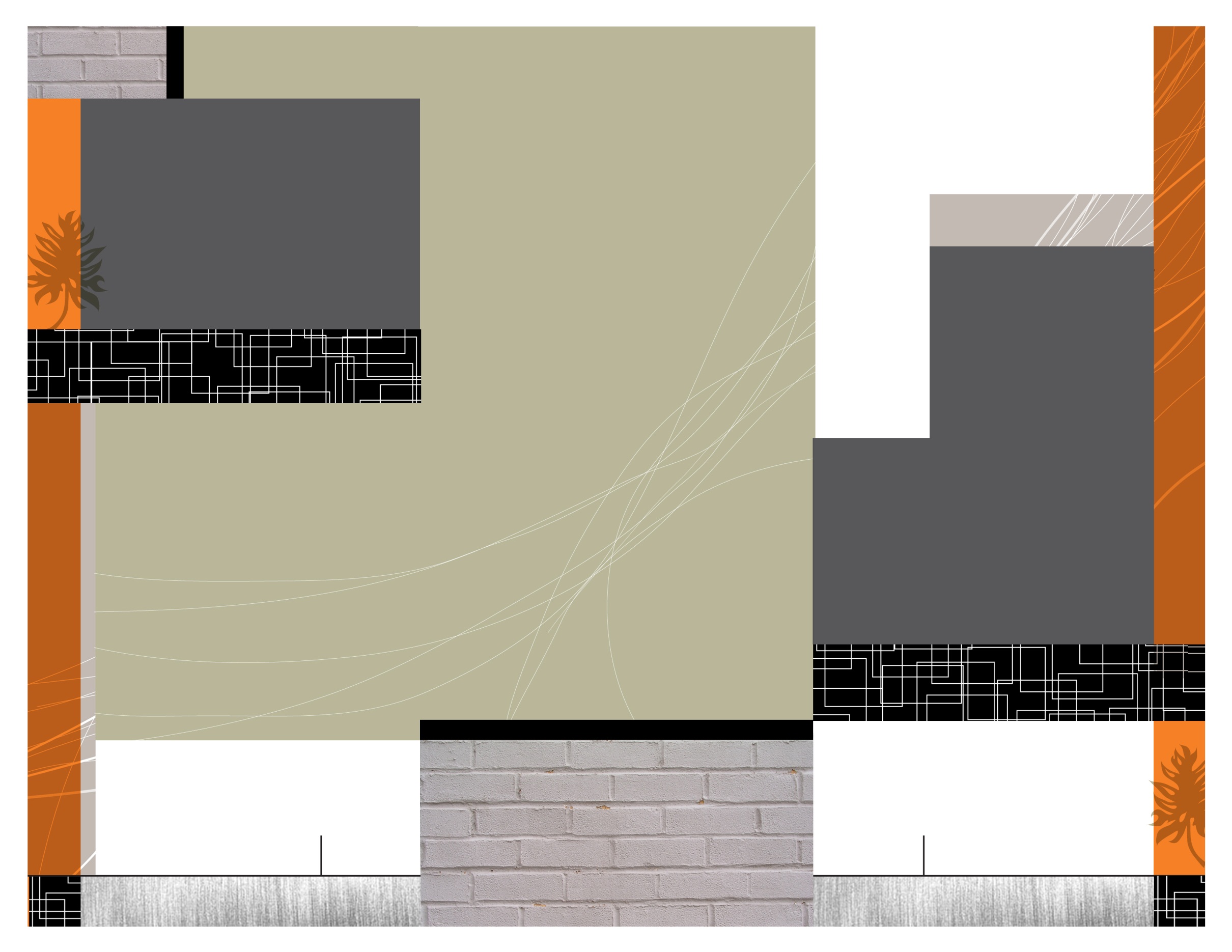
Nuclear power plants produce radiation. Radiation can cause people to get sick or even die. Disasters in nuclear power plants can also happen such as a nuclear meltdown. Also nuclear reactors only last about forty to fifty years.

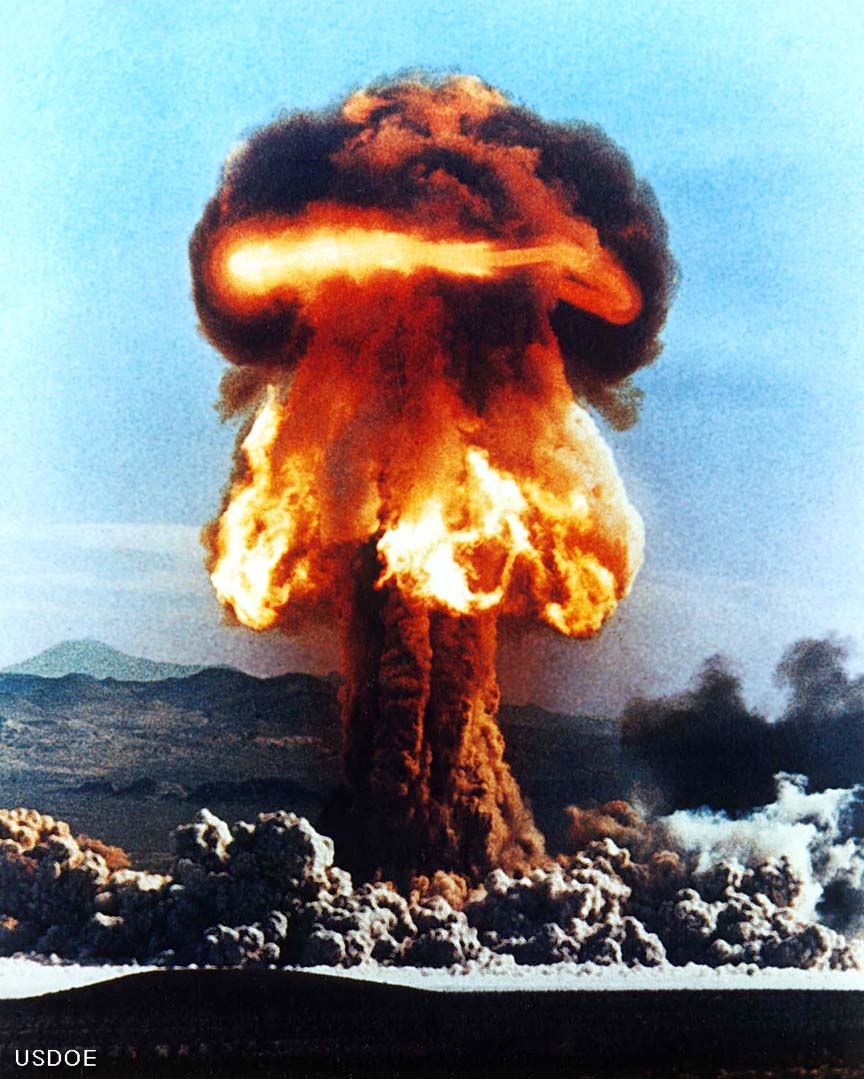
Nuclear Power

By Manny Meza

And

Patrick Bifano

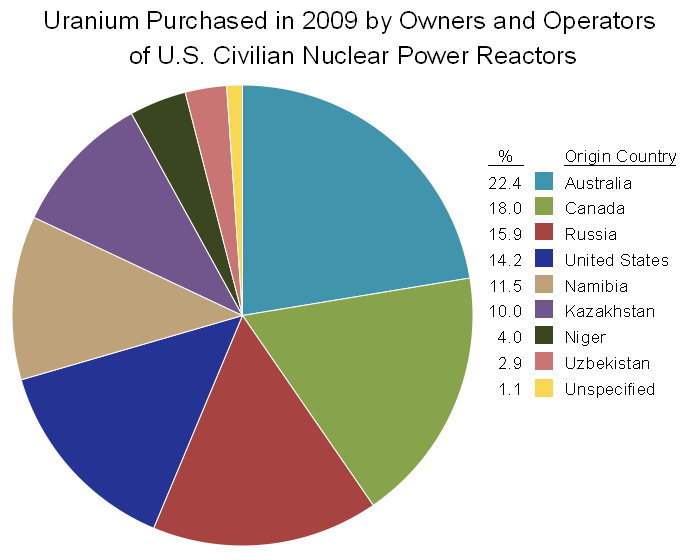
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Nuclear energy is also used in in diagnosis and the treatment of medical conditions such as cancer. Nuclear energy is also used for nuclear bombs and weapons.

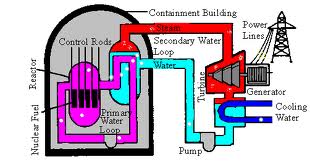
**Other Applications**

Charts and Diagrams



How it works

The interaction of two heavy elements creates a chain reaction. The nuclear reaction that generates heat is used to boil water that turns into steam. The steam turns the turbine. Then the turbine turns the generator and then the generator produces electricity.



**Citations**

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